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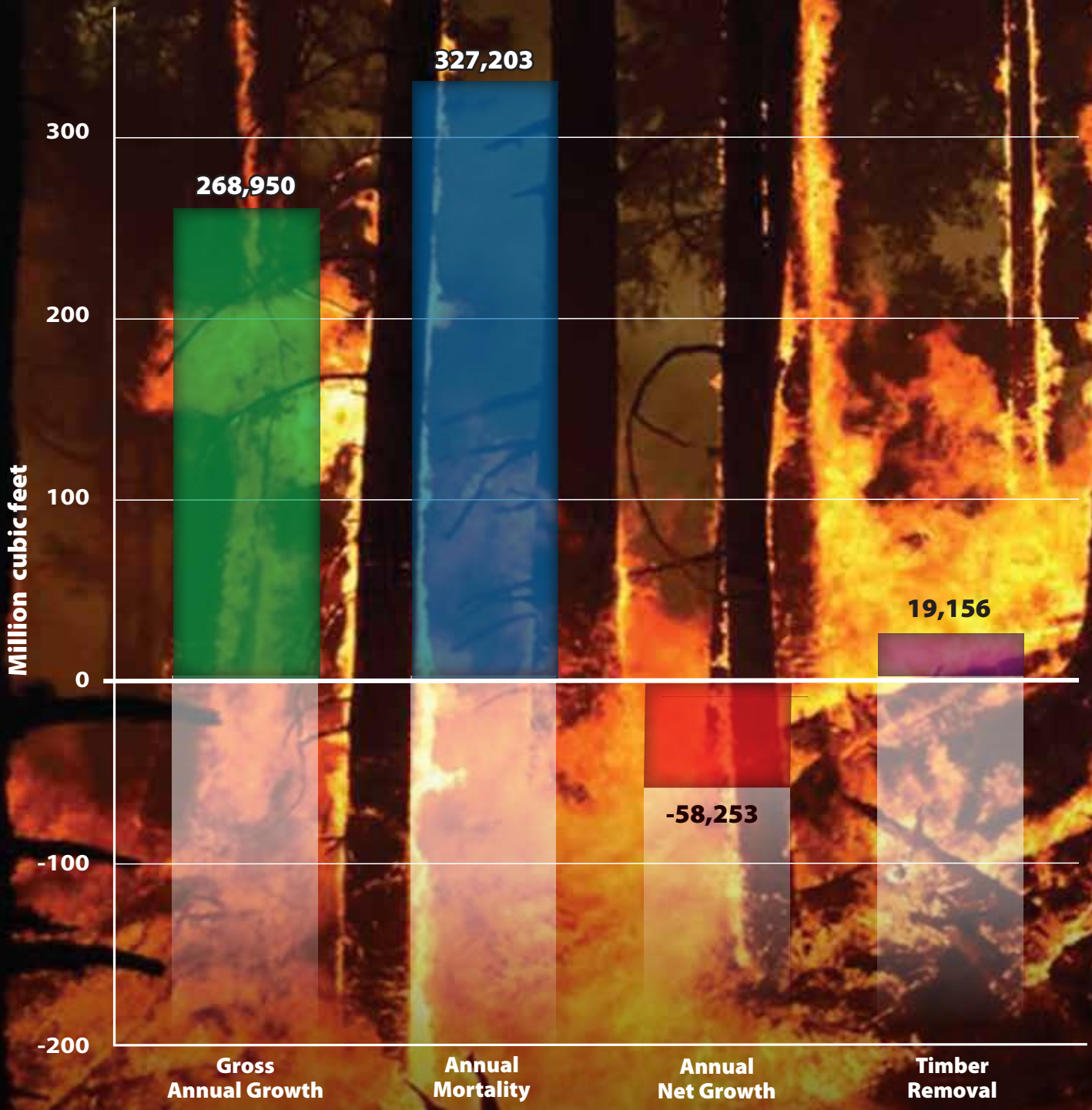

Evergreen State No More?

Death and Destruction in National Forests East of the Cascades

The bar graph on the cover of this special *Evergreen* report illustrates a tragedy that seems almost unimaginable in the Evergreen State – the loss of millions of National Forest acres east of the Cascades in a state long admired for its forests and deep forestry roots.

More on the chart and its meaning in a moment. First, the backstory. Three years ago, a long time Evergreen Foundation supporter suggested we take a close look at the congressionally blessed forest collaborative process. We did, and we liked what we saw. Forest collaboration replicates the old New England town hall meeting process. Citizens of varying points of view get together to talk through their differences of opinion in hopes of arriving at a common consensus understanding and, thus, a way forward.

Our investigation has yielded more than 50 question and answer interviews with collaborators in Idaho, Montana and Washington, men and women from all walks of life: foresters, conservationists, loggers, wilderness advocates, sportsmen, lumbermen, grass roots activists, two governors, one Forest Service Chief, several Forest Service retirees, county commissioners, state and federal land managers, biologists, forest ecologists, fire ecologists and silviculturists.

Those we interview in this report are members of- or somehow connected to - the Northeast Washington Forest Coalition based in Colville and run by Gloria Flora, a Forest Service retiree whose story explains why she is retired.

NEWFC is the brainchild of lumberman, Duane Vaagen, a Colville native, and conservationist, Mike Petersen, Executive Director of the Spokane-based Lands Council. We interview them in this report. Once protagonists in the old forestry wars, they have become friends.

The common bond shared by collaborative groups we've come to know is a commitment to restore natural resiliency in western National Forests, resiliency being the ability of a forest to fend off insect and disease epidemics we see today, without much help from us.

These groups face an enormous challenge and very long odds. More than 90 million acres of the west's federal forest estate is in what fire ecologists call Condition Class 3, meaning it is ready to burn, or Condition Class 2, meaning it soon will be.

If annual mortality in National Forests east of the Washington Cascades could be compressed into one solid block of wood the dimensions of the Seahawk's CenturyLink Stadium, the block would rise more than one mile into the sky.

There are at least 60 all-volunteer collaborative groups at work in the Pacific Northwest. Each has its own personality and its own issues. But those who collaborate tell us that developing trust relationships among such diverse memberships can take years. Then there are the hundreds of hours the groups invest in planning and project meetings with the U.S. Forest Service.

Collaborative goals don't differ much: find ways to reduce the risk of catastrophic wildfire. Remove dead and dying trees, safely burn as much woody debris as possible, leave the best trees and the best tree species, promote natural regeneration, plant where planting is needed. Not much new here.

What is new is a realization that not every National Forest acre that is in trouble can be saved. There isn't sufficient time or manpower. The clock will run out in Washington east of the Cascades in 20-30 years. We thus come to what fire ecologists call "managed fire," a new and controversial approach that permits firefighters to "herd" big fires rather than attempt to stop them. Fire thus becomes the thinning agent. Critics call it defeatist. Advocates call it a tool.

Before deciding which faction to support in the coming debate, bear in mind that the Forest Service has known about the problems associated with increasing forest density since the early 1950s, and still chose not to steer a course correction.

Also, remember that everything is different west of the Cascades – tree species, soil types and productivity, weather, wildfire intervals, terrain, ownership and management objectives.

National Forests dominate the landscape east of the Cascades. When you cross the Cascades, west to east, westside Douglas-fir gives way to mixed conifer, dry site forests.

Historically, these forests were more open, a result of frequent low intensity burns that favored shade intolerant tree species well suited to the more arid, desert-like landscape: ponderosa and lodgepole pine and western larch.

Early day logging practices, which favored removing the biggest trees, and thus the best natural seed sources,

coupled with the public's long ago decision to "exclude fire," from its forests, left us with dense forests dominated by shade tolerant white fir – a species more susceptible to insects and diseases, especially during prolonged drought.

The counter-intuitive result of our attempt to exclude fire from our forests has been larger, more frequent and more destructive fire.

Now to the chart on our cover – a chart we built from the most recent data the Forest Service could provide:

- Annual gross growth in National Forests east of the Cascades: **268.95 million cubic feet**
- Annual mortality in the same National Forests: **327.2 million cubic feet**
- Net growth in the same National Forests: **minus 58.25 million cubic feet**
- Removals [harvest] from these forests: **19.16 million cubic feet,** about 18 percent of what dies annually

Visualization can be difficult, but here's a visual you won't soon forget.

If annual mortality in National Forests east of the Washington Cascades could be compressed into one solid block of wood the dimensions of the Seahawk's CenturyLink Stadium, the block would rise more than one mile into the sky. One mile this year, two miles next year, and on and on and on, year after year.

The take home message: until net growth is back in the plus column, Washington National Forests east of the Cascades will continue to die and burn in increasingly unstoppable wildfires.

Forest collaboration is the only route to safety. The forest sciences provide the route. Technology provides the tools. Private industry will invest, but only if Congress covers the litigious risks that continue to cripple meticulously- planned forest restoration projects. Washingtonians have a long way to go and a short time to get there.

Jim Petersen,
Founder and President

Editor: *Additional information concerning National Forest conditions east of the Washington Cascades is available on our website. Note the interviews with outdoor recreation authority, Bruce Ward, and former Washington Public Lands Commissioner, Peter Goldmark. Also, research papers by Paul Hessburg and Mark Corrao.*

THE TRADITION OF LAND STEWARDSHIP

An essay by Duane and Russ Vaagen, Vaagen Brothers Lumber Company, Colville Washington; Mike Petersen, Executive Director, The Lands Council, Spokane, Washington; and Jim Petersen, Founder and President, The Evergreen Foundation, Dalton Gardens, Idaho

President-elect Donald Trump's improbable victory has us wondering what comes next on the federal forest management front. Former Montana U.S. Senator, Ryan Zinke, is the new Secretary of the Interior, and former Georgia Governor, Sonny Perdue, is the new Agriculture Secretary. Yet to come is a new Under-Secretary of Agriculture for Natural Resources and Environment, and, most likely, a new Chief of the Forest Service.

Given Mr. Trump's business executive appointments., we won't be surprised if some natural resource positions aren't filled from the private sector. Many people believe that the U.S. Forest Service should be run by a Chief who has successfully run a business. Jim Petersen recently wrote the following in an essay published by the Coeur d'Alene Press:

"It does not matter whether he or she can tell the difference between a ponderosa pine and a Douglas-fir. What matters most is making the trains run on time in a far-flung organization that employs some 34,000 people whose disparate views concerning the Forest Service's mission have hobbled it."

There is a good example in Spokane, Washington, where Rick Romero, with a deep business background, became Director of Utilities. Romero successfully brought the utilities department into the 21st century, while having no background in utilities or engineering.

No doubt some will question the wisdom of importing a Forest Service Chief from the private sector, but no one questions the fact that the agency desperately needs a strong dose of new energy that can only come from a leader capable of communicating concise and unambiguous marching orders to his or her troops.

This should be accompanied by easily measured performance standards the public can understand and support. Unfortunately – inexplicably - no such individual standard exists. Is it any wonder so many forest stakeholders are openly critical of the Forest Service's inability – some say unwillingness - to move faster at the vitally important work of restoring our at-risk national forests before they burn in severe wildfires.

Old clearcuts, the residue of past forest management practices, have been overrun by insect and disease-prone tree species, and our wildfire seasons now run from early spring to late fall. We are running out of time in which to launch a meaningful restoration program that can restore natural resiliency in forests that can be saved. Some are simply too far gone.

Given Mr. Trump's impressive showing in our country's rural environs, it's a good time to summarize the legislative and administrative changes that are necessary to speed the restoration of national forests in which trees are now dying faster than they are growing. These long overdue changes fall into the following categories:

The fire-borrowing mess

About half of the Forest Service's $5.8 billion annual budget – some $2.5 billion - is allocated to fighting forest fires. This amount is expected to rise above 60 percent sometime in this decade, meaning that a mere 40 percent of the Forest Service's annual budget is available for investments in forest restoration projects and all other programs designed to reduce the risk and severity of wildfires.

Why the Forest Service must pay its firefighting costs in this manner is a complete mystery to us. We know of no other federal agency that has its budget cannibalized to pay the bills associated with natural disasters: earthquakes, tornadoes, floods, volcanic eruptions, hurricanes, landslides or tidal waves. Why then the Forest Service? No one knows, except to say, "That's what the regulations say."

Congress has been discussing solutions to the so-called "fire borrowing" mess for several years. Why is this so hard? Simply transfer the Forest Service's firefighting responsibilities to the Federal Emergency Management Agency [FEMA] and get on with it. Millions of acres of our National Forests are at elevated risk. These acres are in what fire ecologists call Condition Class 3 [ready to burn] or Condition Class 2 [soon will be]. It isn't necessary for the Forest Service to treat all of these acres before they burn, but large landscapes could be ecologically restored to reduce the severity of wildfire and protect resilient species.

Fighting wildfires has become a cottage industry inside the Forest Service. Employees detailed to summer wildfires can increase their annual salaries by 50 percent or more. Understandably, we don't hear these folks pounding the table for transferring the Forest Service's firefighting responsibilities to FEMA. Meanwhile, forest restoration projects are cancelled for lack of money, and our treasured national forests continue to burn in wildfires for which there is only one historic precedent: the Great 1910 Fire, which swept over three million acres of virgin timber in northern Idaho and western Montana in a 48-hour firestorm. Several towns were wiped out. Eighty-seven people – mostly firefighters – lost their lives. Could it happen again? But for changes in wind direction, it could have happened several times over the last 20 years. In the early 1990s, the Forest Service became so concerned about losing the entire town of Libby, Montana that it took the precautionary step of railing firetrucks from Ohio.

A New Mission

The mission of the Forest Service has changed over the past two decades. The past clearcut logging of old growth forests and entering roadless areas has given way to a more ecological approach. But the approach to firefighting hasn't changed with the times and it taking over the agency.

The Forest Service is likely to view the loss of its historic firefighting mission as a slap in the face. It shouldn't. Rather, it should embrace a new and more tightly focused mission that assures the American people that

it is devoted to restoring as our national forests as much as is humanly possible in the next 20 years. Why 20 years? Because what cannot be restored in 20 years will very likely be lost to wildfire, further stagnate, or miss a chance at becoming more resilient to insects and wildfire.

The first step to restoration is a landscape scale evaluation to determine where and how best to restore historic patterns of vegetation structure and composition. The landscape scale restoration will leave a forest where some areas are thinned, some areas are left as they are, and some areas will have small openings so that shade intolerant species can thrive. This work can often be done by mechanical harvesters run by loggers who pick their way through dense stands, removing lesser quality trees, so more resilient residual trees can grow again. Although these machines are usually quite large, their pounds-per-square inch footprint is less than that of a horse or a walking man.

Once the thinning work is complete, logging slash is burned and "prescribed fire" is run through the thinned stand to remove woody debris that would otherwise fuel another forest fire. Once this two-step process is completed, the area won't need to be entered again for another 20-30 years. Meantime, residual trees continue to grow and naturally reseed the site.

A new management concept is emerging that merits serious consideration. So-called "managed fire" acknowledges the fact that we can't possibly mechanically thin and burn every troubled acres in western national forests. At their discretion, fire managers would have the authority to "herd" wildfires through areas with timbered areas heavy biomass accumulations. When and where this can be done safely, fire is thus allowed to play its historic natural role in forest renewal.

We know the public does not like smoke from any source, including the wood stoves that heat so many of our region's homes in the winter. Smoke from forest fires is inevitable, but prescribed and managed fire allow us to choose the dosage. We should choose the much smaller doses these two options offer.

Measuring performance

The lack of performance standards in the Forest Service today means that the public can't determine if the agency is moving toward its stated mission: "Caring for the land. Serving the people." Minus strong leadership in the Chief's office, this won't change. The Forest Service will continue to make excuses for its inability to meaningfully – and measurably – address our forest health crisis.

One sensible solution is a reward system that measures annual performance on a scale that gives points for the size of the landscape area restored. Those with the most points on a given national forest are paid year-end bonuses.

Bonus points should also be awarded to Forest Service employees that are heavily engaged with local stakeholder collaboratives – those diverse, all-volunteer groups that are trying to assist the agency in the development and monitoring of forest restoration projects. Awarding additional points ought to bring a swift end to the agency foot-dragging our collaboratives find so disappointing. The new Forest Service Chief should immediately make it clear that, in Donald Trump's world, foot-dragging and excuse making are not tolerated.

The tradition of land stewardship

The fastest way for a Forest Service employee to get promoted today is to accept a transfer to a new post, usually on a different national forest. Employees are rarely in one place long enough to develop an affinity for the land or the people who work it daily. Nearly 40 years ago, Sally Fairfax, a University of California forest policy professor addressed the consequences the loss of land stewardship connection that permeates the Forest Service today. Here is what she wrote:

"The tradition of land stewardship, if indeed it survived the 1950s and 1960s, may have died in the 1970s. RPA [Resource Planning Act] and NFMA [National Forest Management Act] take the initiative from experienced land managers – those revered people on the ground, the folks who have lived with the land and their mistakes long enough to have developed wisdom and a capacity for judgment – and gives it to lawyers, computers, economists and politically active special interest groups seeking to protect and enhance their own diverse positions.

This shift in initiative will result from the layers of legally binding procedure that RPA and NFMA foist on top of an already complex and overly rigid planning process. Constant procedural tinkering does not, I fear, lead to efficiency or simplicity. Rather it promises a proliferation of steps, sub-steps, appendices and diverticulae that makes the Forest Service susceptible to the ultimate lawyer's malaise: the reification of process over substance."

Restoring what Professor Fairfax called "the tradition of land stewardship" requires that we reward Forest Service employees for staying put, for living with the land and their mistakes long enough to develop wisdom and a capacity for judgment." Developing these assets requires that Forest Service employees first embrace local people who have lived with the land long enough to develop a healthy respect for what it can provide and what it can't provide.

Related to the Forest Service's debilitating promotion policy is the agency's habit of "detailing" its key people to other far-flung outposts. With so much on-the-ground work to be done "at home" this policy makes no sense. Again, Forest Service employees should be rewarded for staying put and completing the jobs they were hired to do. Acres treated is the only measuring stick for forest restoration that makes sense, and it is one that the public can easily understand and support.

Increasing the pace and scale of collaborative restoration work

It has taken nearly 30 years for forest collaboration to gain traction in western national forests. The earliest collaboratives in northern California and southern Oregon failed because some conservation groups feared their loss of legal and administrative control

To read the complete stewardship article, go to our website: www.evergreenmagaxzine.com, click on "State of Our Forests" on the toolbar, then click on "Washington."

PAUL HESSBURG: Fighting Fire With Fire

Paul Hessburg earned his PhD in Botany and Plant Pathology in 1984 at Oregon State University. He has worked in research for 38 years, 27 of them at the Forest Service, Pacific Northwest Research Station in Wenatchee, Washington. He is also an Affiliate Professor at the University of Washington and the University of Idaho where he has research projects with faculty, graduate students, and post-doctoral fellows.

In this interview, Dr. Hessburg explains his best understanding of the underlying causes of the current forest health/wildfire challenge that is gripping national forests east of the Washington Cascades and elsewhere in the West.

Evergreen: Dr. Hessburg, on a scale of one to 10, one being awful and 10 being great, how would you rate the condition of national forests in eastern Washington State?

Hessburg: Conditions in eastern Washington vary from place to place, so it's difficult to provide a single score. Overall though, I would give them a failing grade, perhaps a three or four on a scale of one to 10. Lots of dead and dying trees, insect outbreaks and disease epidemics and, of course, high wildfire vulnerability. But the great thing is, you can see "good bones" remaining in many forests when you look at them—suitable building blocks for a restored future forest still remain in many areas, and I am hopeful we can make progress.

Evergreen: "Good bones" meaning what?

Hessburg: Some areas of the dry and moist mixed conifer forest have been thinned and prescribed burned, and these look quite good. There has been a fair amount of social license for work, especially in the dry forests, and I'd give the treated portions an eight or nine on your scoring scale. But the need for follow up maintenance burning remains a pressing need, the footprint of treated areas is small, and society, by and large, has unrealistic ideas about preventing future smoke.

In the absence of ongoing maintenance burning, I harbor great concern for the future of these forests.

Evergreen: What you're telling us is that we can't treat at risk forests just once and walk away.

Hessburg: That's correct. There is no quick fix, but we do have the needed tools. Dry and moist mixed conifer forests in eastern Washington are really the nut of the current problem. These forests are quite productive and certainly capable of growing medium and large-sized Douglas-fir, ponderosa pine, western larch, and western white pine. But logging methods in favor during most of the 20th century led to the removal of the largest and most fire tolerant trees over fairly large areas. These were the large, old, legacy trees that carried the genes necessary to perpetuate fire- and climate-resilient forests.

Evergreen: Logging as it was done following the Second World War has certainly fallen out of favor, hasn't it?

Hessburg: The kind of selection cutting and clear-cut logging we saw during that period certainly has fallen from grace. And now we face fairly dire consequences from removing so many large fire-tolerant trees, over such large areas. Most folks didn't understand then what would come of those actions. Congress was appropriating large sums each year for the purpose of harvesting forest to support a rapidly growing nation. Recall that the housing boom was in full swing.

Evergreen: Can you describe those consequences for us?

Hessburg: Basically, we unwittingly created a prime opportunity for smaller, shade tolerant and fire intolerant tree species – mainly grand fir, white fir, and Douglas-fir – to quickly colonize sites that had historically been dominated by large, open grown, shade intolerant and fire tolerant tree species like ponderosa pine, Douglas-fir, and western larch. Fire tolerance was a vital attribute because fires historically burned every five to 20 years at low or moderate intensity. Large size and a thick bark allowed many of these trees to survive frequent fire intervals.

Evergreen: If we're following you correctly, many of our forests can't tolerate much fire today, and they don't look much like the forests of old – before large scale logging began.

Hessburg: That's right. Today's mixed conifer forests are dense and layered. The table is set for large and severe wildfires and insect outbreaks, especially during prolonged, drought periods. There is a strong sense of urgency today among many forestry practitioners. The need for some sort of intentional landscape treatment is large.

Evergreen: We know the harvest story well enough to know that it comes

with its own baggage. For example, many conservationists that today support mechanical thinning also support limits on the diameter of trees that can be harvested. This seems self-defeating to us if your goal is to restore forest compositional and structural diversity. Would you agree?

Hessburg: I do agree. But the story here is pretty nuanced. Recall that the focus of 20th century harvesting in historical forests was on large and old trees. They cut the biggest and best, and left the rest in those days. So it stands to reason that folks would be gun shy about harvesting larger trees. The problem is that overly simplified rules thwart some pretty smart restoration work. Repeated 20th century harvests often removed most of the fire tolerant pines. In some of these forests, there is inadequate stocking of pine for a future forest that is fire and drought tolerant, but there are ample Douglas-fir and grand fir of fairly large diameter. Not having strict diameter limits—like the 21-inch rule—allows thoughtful managers the opportunity to regenerate these habitats to pine dominance. This is especially important where shade tolerant forests dominate on dry south-facing slopes and ridgetops.

Evergreen: Which further minimizes the chances that a subsequent fire would jump into the crowns of trees in areas that have already been thinned or regenerated?

Hessburg: To some extent, yes. Regenerating forests to pine is needed in some places, but recall that until trees get larger, they too can be vulnerable to severe fires for a time. Obviously as the trees get larger, bark gets thicker, and crown bases elevate by self-pruning, this is more of a sure thing under a majority of fire weather scenarios.

Evergreen: Talk to us a bit about managed wildfire. Not much has been written about it until recently. How is it different from prescribed fire?

Hessburg: The sheer size and severity of the problem we face east of the Cascades in Washington tells us that there probably isn't enough time or money to thin and prescribed burn every acre. We will not likely thin and burn our way out of this problem. That's an important take away. Thinning and prescribed burning is strategically important and especially effective where there is a need for high certainty about the location and quality control over the finished results. For example, near the wild-land urban interface, and adjacent to impor- tant habitats or natural resources.

Managed wildfire is another important tool in the toolbox. It gives wildland firefighters the opportunity to "herd" naturally ignited wildfires through the landscape, when weather and fuel conditions permit. Fuel quantities have to be right, fuel mois- tures have to be in the sweet spot, and fire weather conditions have to be such that fire managers have high confidence that they can achieve their burn prescription–that is, meet their goals for fire behavior and fire effects on the ground.

Remember we said that 98 percent of wildfire ignitions are currently doused. Well, under moderate fire weather conditions, many of these natural ignitions can be put back to work thinning under-story vegetation, consuming fuel ladders, and reducing surface fuels. Ideally this is done some distance from the wild-land/urban interface because spatial controls are less certain than with prescribed burning, especially where prior thinning has reduced canopy fuels.

Evergreen: Do you think people accustomed to an all-out effort to extinguish wildfires will support the idea of letting some fires burn?

Hessburg: That's a great question. Perhaps they will, perhaps they won't.

The people I meet and talk with are pretty darn smart. Once they understand the options and the trade-offs, I am betting that they will feel adequately informed to support the choices that make the most sense in their nearby communities. Prescribed burns and managed wildfires can help managers reduce the risk of even larger and more destructive wildfires.

It's a bit of a "duh". Where wildfires are away from people and infrastructure, I am betting and hoping that folks will be open to putting some of these back to work.

Evergreen: We'll come back to managed wildfire in a few moments, but can you first address the claim by some that our forest health problems are confined to lower elevations, where most of the harvest activity has been concentrated since the end of World War II.

Hessburg: I'd be glad to. Many feel that high elevation cold forests are doing just fine, but I don't agree. In my lab, over the last three decades, we have reconstructed and compared early and late 20th century conditions for about 400 landscapes throughout the Inland Northwest. And we have examined a great many forested gradients that extend from the lowland valleys to subalpine and alpine environments. We have found that important changes have occurred in dry, moist, and cold forests, but the changes are quite different among the forest types. And even among individual forest types, they vary from place to place. No one size fits all.

For example, historically, some cold forests – think lodgepole pine, subalpine fir, Engelmann spruce, and mixes of these – saw fire every 150 to 300 years, and the acres burned could be quite large, perhaps 30 to 40 percent of the total area at any one time. That's a lot of fire! The resulting snapshot of the landscape, at any point in time, would appear as a patchwork of previously burned and recovering areas of varying size and time since fire. This patchwork provided a built-in resilience mechanism that controlled fire flow across the landscape under all but the most extreme fire weather conditions. It essentially limited where many future fires could burn. Fire suppression has eliminated these patchworks in many cold forests.

Evergreen: So this is the counter-intuitive aspect of wildfire. We think we are helping nature along by putting out forest fires before they get big, when all we're really doing is adding fuel and contagion to subsequent wildfires, to make them burn hotter and over progressively larger areas. And as the fires grow worse, we work harder still to put them out.

To read the complete interview with Paul Hessburg, go to our website: www.evergreenmagaxzine.com, click on "State of Our Forests" on the toolbar, then click on "Washington."

DEREK CHURCHILL: Restoring Natural Resiliency

Derek Churchill is both a hands-on forester and a forest scientist, an unusual combination in a forestry world that is increasingly dominated by specialized disciplines. He holds a part-time research scientist position in the School of Environmental and Forest Sciences at the University of Washington, where he also teaches forest management classes.

In this interview, Churchill discusses forest conditions east of the Cascades in Washington, as well as his research projects on northeast Washington's Colville National Forest, where he advises the Northeast Washington Forest Coalition.

Evergreen: Dr. Churchill, you're a very busy guy, so let's cut to the chase. On a scale of 1-10, one being awful, how would you rate forest conditions on National Forests east of the Cascades in Washington state?

Churchill: Maybe a three or four. Either way, not good.

Evergreen: Has mortality surpassed annual growth, as it has in Colorado and soon will in several other western states?

Churchill: With the big forest fires we've experienced east of the Cascades over the last three years, and the insect outbreaks we've seen in recent years, I'd say mortality now exceeds gross annual growth.

Evergreen: This seems almost unbelievable given what seemed to be top-notch Forest management in the years following World War II. What happened?

Churchill: We didn't know all we thought we knew. With the post-war focus on removing big, old trees from National Forests and regenerating new forests as quickly as possible we didn't realize we were moving the backbones from the old forests.

Evergreen: The backbones?

Churchill: The large ponderosa pine, Douglas-fir, and western Larch fir that are fire and drought resistant and provide a natural seed source for forest recovery after disturbance. But it wasn't just a matter of removing the backbones, we also took wildfire out of these fire-dependent ecosystems, allowing other tree species that prosper in shade to gain dominance on landscapes that had been dominated by fire-adapted tree species for thousands of years.

Evergreen: The primary shade tolerant invader being white fir which, because of its thin bark, doesn't handle the heat from fire very well, or the natural stresses that accompany prolonged drought, namely insects and diseases that can detect stress in trees. Trading tree species that were suitable for the landscape and climate for tree that weren't well adapted. Do we have it about right?

Churchill: You have it about right. I would include grand fir, as well as other shade tolerance species that are now much more prevalent than when fires burned through forests every 5 to 30 or so years; such as sub-alpine fir, lodgepole pine, and even western red cedar in Northeast Washington. These species were part of historical forests, but were much more restricted to sites where fires didn't burn as frequently

Evergreen: What did those forests look like before logging began, white fir invaded and wildfire was intentionally removed from the landscape by those bearing social licenses from a different era?

Churchill: And it was, as you suggest, a social decision with great political backing in an era when the public favored economic considerations and believed all forest fires were bad. But to your question, pre-European mixed conifer, dry site forests were more open with many fewer trees per acre that what we see today. Low intensity fires burned frequently, every 5-20 years, and kept shade tolerant trees species from gaining significant footholds. Ponderosa, interior Douglas-fir, and western larch were the dominant tree species.

Evergreen: Ponderosa, fir, and larch because of their thicker bark, insulation from the heat of fire.

Churchill: Yes. Our forests were, in a very real sense, powered by fire, with frequent, light burns that prevented the woody debris buildups that fuel today's very large and destructive wildfires. There was a lot of natural resilience built in to the system. Now it's reduced, and we are left with forests that have far too many trees for the carrying capacity of the land they occupy.

To read the complete interview with Derek Churchill, go to our website: www.evergreenmagaxzine.com, click on "State of Our Forests" on the toolbar, then click on "Washington."

GLORIA FLORA: Using Nature's Templates

Gloria Flora, graceful though she is, is no shrinking violet. If she was, she'd probably still be working for the U.S. Forest Service. But she resigned in disgust on December 31, 1999.

Evergreen: Ms. Flora, given your pedigree, it is a little difficult to know exactly where to start with this interview. . The mere fact that you are now serving as Executive Director of the Northeast Washington Forest Coalition, tells us that much has changed in your life since you left the Forest Service in 1999.

Flora: It certainly has in some ways. But my non-profit organization's mission is similar to the Forest Service's commitment to sustain public lands. I am still very engaged in forest issues, like protecting the Rocky Mountain Front in Montana, working with the Northeast Washington Forest Coalition and the Colville National Forest. Also teaching wildfire and drought resilience on small farms and ranches with forested lands. My passion for conservation hasn't changed so, while my life is different than it was for many years, I haven't slowed down one bit.

Evergreen: Any regrets about your Forest Service years?

Flora: None, though I find it a bit ironic that I am now engaged in all kinds of stewardship and collaborative work that was being promoted by other progressive thinkers in the agency before I left.

Evergreen: How so?

Flora: We talked the talk about restoration forestry, but we never walked the walk. We never made the necessary investments or policy changes required to get us off the ground. Now restoration is all we talk about. We don't have a choice. Recognition of our miscalculations, about fire, drought and forest health dynamics now consumes us – and our forests. Unfortunately, in some areas we no longer have the infrastructure – the wood processing capacity or the markets – needed to handle all of the by-products of the restoration work that needs doing.

Evergreen: Insects, diseases and inevitable wildfire seem to be the drivers, wouldn't you agree?

Flora: I absolutely agree – and our situation is only going to get worse as our climate continues to warm. Multiple, multiple, multiple wildfires. We lack the capacity – including the dedicated federal dollars – to deal with this problem. Wildfire is consuming a larger and larger percentage of the Forest Service's budget, leaving less for restoration work on a meaningful scale.

Evergreen: And when you talk restoration, we assume you mean thinning and the reintroduction of prescribed fire, so as to reduce the density of woody debris that often fuels subsequent wildfires...

Flora: That's correct.

Evergreen: It seems like a no-brainer to us.

Flora: It seems pretty straight-forward. Understanding the underlying causes, the science and the solutions science provides is part of it. But there are conflicts in the research and the issues swirling about us are laden with conflicting values and agendas. There are no convenient bogymen that lend themselves to six-second sound bites. So many factors have contributed to our current condition that it is impossible to affix blame for the complex ecological collapse of western federal forests.

Evergreen: And so if you lean hard left or hard right, you tend to go looking for the usual suspects: radical environmentalists who oppose all forms of forest management, or greedy lumbermen who presumably want to chop down all the trees.

Flora: It was certainly that way during my Forest Service years. We had wilderness advocates and timber industry advocates, but no one who advocated for forests or the intrinsic benefits they provide that you can't easily monetize. For years, those who bravely stood up publicly and said, "Wait a minute, we have a problem here. Our forests are dying and burning. What's happening and why?" weren't heard above the din of dissent.

Evergreen: We published our first forest health report in 1989. It was titled, "Gray ghosts in the Blue Mountains," and it chronicled the decline of forests in eastern Oregon's Blue

To read the complete interview with Gloria Flora , go to our website: www.evergreenmagaxzine.com, click on "State of Our Forests" on the toolbar, then click on "Washington."

MIKE PETERSEN: Working Together

Four years ago, Mike Petersen, Executive Director of the Spokane-based Lands Council, told his organization's Board of Directors they needed to shelve their litigation strategy, forsake their "no federal forest management" stance and embrace a little known but congressionally blessed problem solving process called forest collaboration.

In this interview, Mr. Petersen discusses his enduring relationship with Duane Vaagen, President of Vaagen Brothers Lumber Company, Colville, Washington. Mr. Vaagen pioneered forest collaboration in Northeast Washington. "It was our defining moment," Mr. Petersen says of his chance encounter with Mr. Vaagen following a 2001 meeting in Colville.

The two men have worked side by side since then, publicly supporting one another's ideas about actively managed forests and wilderness designations.

Evergreen: Mike, this is our second interview with you. On April 14, we talked about the Land Council's decision to embrace forest collaboration and the leadership role you've played in the Idaho Panhandle Forest Collaborative. But your first collaborative outreach came in Northeast Washington and was the result of your chance meeting with Duane Vaagen, Isn't that right?

Petersen: That's correct. Duane and I met at a meeting of some sort – I don't recall what – in Colville in 2001 or 2002. Tim Coleman, who runs the Kettle Range Conservation Group at Republic, Washington, had met earlier with Duane to start these discussions. Duane approached me after the Colville meeting with some 'what if' questions about wilderness and timber management. I liked what he had to say.

Evergreen: And what was it he said that you liked?

Petersen: Well, it's more than a decade ago, so I don't remember his exact words, but basically he thought we could help each other get our needs met on the Colville National Forest.

Evergreen: The Council's need being...

Petersen: More designated wilderness and better forestry in the managed part of the forest.

Evergreen: And what did Mr. Vaagen say he needed?

Petersen: Certainty in log supply – the timber he needs to keep his mills running at Colville and Usk.

Evergreen: So what exactly was Mr. Vaagen's pitch?

Petersen: He said he thought the Colville was large enough to accommodate our desire for more designated wilderness as well his need for areas for timber production.

Evergreen: Pretty daring thinking in 2001 – especially coming from a lumberman whose industry has opposed wilderness designations for decades.

Petersen: It certainly was, and that was why Tim and I were so intrigued. But over the years, I've learned that Duane is very transparent and pretty disarming at the same time. He makes you think – or at least does me.

Evergreen: Many people don't understand what designated wilderness means, so perhaps you could describe the designation to us.

Petersen: Sure. Congressionally designated wilderness areas can only be reached on foot or horseback. There are no roads and motorized travel is not permitted. Forests are not managed, except by nature, and no timber harvesting will ever occur for any reason.

Evergreen: And Mr. Vaagen is okay with that?

Petersen: Then, as now, one of Duane's biggest talking points is that the Colville is large enough to accommodate every forest user group.

Evergreen: Do you agree with him?

Petersen: I do. The Colville divides itself pretty nicely into thirds - one third wilderness, one third backcountry, requiring light touch restoration, and one third active timber management that is managed under sustainable, ecological forest practices.

Evergreen: How might these more sustainable ecological practices differ from what happened on the Colville National Forest in the past?

Petersen: In the past there was often an emphasis on taking high value trees, including old growth. There was

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DUANE VAAGEN: Beyond Litigation

Colville, Washington lumberman, Duane Vaagen, looks out over some of the 56,300 acres of standing dead timber killed in the 2015 Stickpin Fire on the Colville National Forest. Vaagen Brothers Lumber Company is a pioneer in the use of small diameter timber, and buys most of its annual log supply from Colville National Forest thinning and restoration projects, many of them jointly developed by the Forest Service and the Northeast Washington Forest Coalition, a collaborative group that represents the diverse interests of public stakeholders living in eastern Washington.

Duane Vaagen is a third generation Northeast Washington lumberman. Born in Colville in 1952, he and his sons, Russ and Kurtis, and his daughter, Emily, own Vaagen Brothers, a lumber company Mr. Vaagen's grandfather started east of Colville, Washington in the 1930s. His father and uncle expanded the operation after World War II, then moved it to Colville in 1968.

In this interview, he discusses his pioneering support for forest collaboration in Northeast Washington.

Evergreen: Mr. Vaagen, your lumbermen peers were very surprised when you got behind the formation of a collaborative group here in Colville. Why did you do it?

Vaagen: We needed to find a way to get beyond litigation. Most of the timber sales that were being offered on the Colville National Forest were being appealed or litigated or both.

So we decided to reach out to the environmental community to see if they were satisfied with the status quo. We quickly found that they weren't and that we shared a common concern for the increasing risk of catastrophic fire in rapidly deteriorating timber stands on the Colville, which has many more trees than it can support.

Evergreen: So you wake up one morning and say to yourself, "It's time to start a collaborative?"

Vaagen: It's not quite that simple, and I certainly had my own doubts about what we might be able to accomplish, but the Forest Service is by far the largest timberland owner in Northeast Washington, so we had to find a new way of doing business with them.

Collaboration was all new then and it seemed like a good avenue for starting a conversation with the folks who were shutting down every timber sale offered on the Colville, and all over the West.

Evergreen: So you pick up the phone and call who?

Vaagen: I'd read several newspaper articles written by a lawyer from Twisp, Washington named Jim Doran. Although he was a well-regarded environmentalist, his more conciliatory tone got my attention. One thing led to another and I ended up hiring Jim to help us quietly set up a collaborative in Colville.

Evergreen: Wow. You two must have found a lot to talk about.

Vaagen: We both did a lot of listening. I wanted to understand the hopes and goals of environmentalists who were suing the Forest Service, and Jim was fascinated by our saw mill, which is configured in a way that lets us to turn small diameter logs into an array of high value wood products. Many people equate small diameter with poor wood quality, but that isn't true.

In 70-90 years, the Colville grows tight-ringed lodgepole and interior Douglas-fir that is exceedingly strong.

Evergreen: Was Mr. Doran able to see potential?

Vaagen: Jim is a very quick study, sometimes too quick for his own good; but, yes, he soon realized that our mill was the solution, not the problem. The trees that need to be removed from overstocked stands on the Colville are ideally suited to our mill. Thinning is pretty much a non-starter if you don't have a viable market for the logs. We have more than 40 years of experience in manufacturing and marketing small diameter logs.

Evergreen: So Mr. Doran was soon a true believer. Then what?

Vaagen: We reached out to Mike Petersen, who runs the Lands Council in Spokane. It did not take us long to figure out that we were both pretty unhappy with the Forest Service.

Evergreen: How so?

Vaagen: Well, for one thing, the Forest Service was playing us off against one another at a time when they should have been encouraging us to find ways to settle our differences of opinion about proposed projects on the forest. We decided the best way to handle the situation was to present a more united front, so we formed the Northeast Washington Forestry Coalition and went to work.

Evergreen: When you say, "Went to

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RUSS VAAGEN: Challenging Misperception

Russ Vaagen is a fourth generation Northeast Washington lumberman, and the oldest son of Colville, lumber manufacturing icon, Duane Vaagen, whose pioneering work in forest collaboration has been nationally recognized. Young Vaagen graduated from Washington State University in 1999 with degrees in business management and human resources.

As a Vaagen Brothers vice president, he oversees daily operations, business strategies and marketing. In this interview, he discusses his involvement in the Northeast Washington Forestry Coalition, a collaborative established in 2002 in the hope of moving beyond management gridlock on the Colville National Forest. Mr. Vaagen is currently the organization's president.

Evergreen: By our reckoning, you were fresh out of Washington State University about the time your dad turned the region's lumber industry upside down with some frequently quoted public statements about how forest collaboration could help end political gridlock in western national forests. True?

Vaagen: I think that's about right. I graduated from Washington State in 1999 and the Northeast Washington Forest Coalition was formed in 2002. But I think Dad's interest in collaboratives goes back to the old Quincy Library Group in northern California.

Evergreen: And Quincy failed, much to the disappointment of many.

Vaagen: It did, but I think we all learned some very useful lessons from Quincy, so I'd stop short of calling it a failure. It was the first step in a long public process that only began to gain momentum when other innovators, like Dad, began to consider its problem solving possibilities.

Evergreen: We have known your father for many years and consider him to be one of the most creative thinkers and doers in the lumber industry today,

Vaagen: He is that. His mind goes a million miles an hour. Hard to keep up with him.

Evergreen: And now you are the president of the Northeast Washington coalition he helped start.

Vaagen: It's a little bit scary, isn't it.

Evergreen: Not really. Your generation is the generation that will determine what the future holds for forest collaboration. What do you see down the road in, say, 10 years?

Vaagen: Assuming our ability to overcome the near-term hurdles, I see a very bright future for the forest collaboratives that are forming across the West.

Evergreen: And what might those hurdles be?

Vaagen: There are a lot of misperceptions about what collaboration is and what collaboratives do. But the biggest problems aren't on the inside where you would expect to find them. They are on the outside. Fringe groups are part of it, but the larger portion involves people who don't understand collaboration and refuse to join our group because they fear we won't accept them if they don't agree with us. This isn't true. Anyone can join us anytime. The more points of view we have represented in our coalition's work the stronger we will be. Trust, transparency and diversity of opinion have been the keys to our ongoing success, and certainly the key to our political success.

Evergreen: How so politically?

Vaagen: Congress has given collaboration its interim blessing, but I don't think we'll be granted the legal authorities we need unless they see that collaboratives are truly bipartisan and that they fairly and honestly represent the interests of as many forest stakeholder groups as is humanly possible.

Evergreen: Apart from serial litigators, who hasn't come to the collaborative table?

Vaagen: We have a hard time engaging ultra conservatives – the conspiracy theory crowd that sees collaboration as a step in the direction of a United Nation's takeover of the United States. They love to throw stones at environmentalists and they hate the Forest Service on principle. We can't force them to join us, but I'm hoping some of their more moderate brethren will give us a look, especially our ranching community. We support grazing on federal lands, but we have been unsuccessful in our efforts to get them to join and support our collaborative.

Evergreen: You would think they would want to be represented in such

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RYAN HAUGO: Good Fire, Bad Fire

Ryan Haugo has been the Nature Conservancy's forest ecologist for northern Idaho and eastern Washington since 2011. He holds masters and doctoral degrees from the University of Washington, and is a widely published research scientist. He is stationed at Yakima, Washington.

In this interview, Haugo discusses the underlying causes of this decline and what the latest scientific research tells us we can do to slow tree mortality and reduce the risk of increasingly frequent and destructive wildfires.

Evergreen: Dr. Haugo, I'd like to start out with a question I don't think I've asked a forest scientist in Evergreen's 30-year history. Is there any truth to the rumor that the Nature Conservancy is actively shopping for someone with whom it can partner in the construction and operation of a saw mill in the Wenatchee area?

Haugo: It's true. The Nature Conservancy has also hired a new a new staffer for our Seattle office whose job it is to look for large pools of investment capital with folks that are interested in both economic and ecological returns. We have Lloyd McGee for the same reason. Lloyd worked for Vaagen Brothers Lumber Company in Colville for many years before deciding he wanted to take a different approach. He's also actively looking for investment capital.

Evergreen: I know that sawmilling is far outside your bailiwick, so I'll get the details from Mr. McGee, but I must say that I've never heard of a conservation group taking such an unusual approach to the fulfillment of its mission. Have you?

Haugo: No I haven't, but the Conservancy has been working for over a decade on forest health and resilience issues involving public lands across the nation.

Evergreen: We have been following the Conservancy's journey into the public sector for some time now, but I think you'll have to agree that the organization's apparent desire to partner in the construction and operation of a saw mill is a game changer in the conservation world.

Haugo: As you have suggested, saw mills aren't in my bailiwick, but I think the mere fact that the Conservancy would consider such an investment speaks to the complexity and seriousness of the forest health situation we face east of the Cascades in our region.

Evergreen: It certainly does, especially given the possible risk to the Nature Conservancy's reputation and credibility, and its historic role in forest conservation in the United States. But how does your current research and that of other forest scientists in the region tie in with the saw mill story?

Haugo: We need to have a very clear understanding of how the wood processing pieces – in this case a saw mill – can be configured to fit with leading edge forest science. The Vaagen Brothers sawmill at Colville is a good example of a technologically advanced mill providing a reliable and unsubsidized market for small diameter trees thinned from overly dense national forests.

Evergreen: That's true, but neither the Vaagen's nor anyone else has been willing to invest the $70 or $80 million required to site such a mill in the Wenatchee area. How does the Conservancy hope to change the perception that the financial risk is simply too great?

Haugo: That isn't a question I can precisely answer for you, but I can tell you that there are economic and ecological principles here that have to be honored to insure that investments made on the wood processing front fit with what we will be doing on the restoration front. My colleagues and I need to form our own understanding of how the economic pieces fit sustainably with the environmental pieces.

Evergreen: That's a tough assignment given the fact that the time cost of money doesn't mesh well with the time it takes to grow a forest, or restore the health of one that's already in trouble.

Haugo: That's true, but I think we have a rare opportunity here to bring environmental and economic principles together in a way that accounts for the natural pieces of forests and the cyclical nature of our timber industry.

Evergreen: Let's start with the environmental principles you referenced. Tell us what those principles are, what you've learned about our Intermountain forest health problems, and what we can do to resolve them?

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TIM COLEMAN: Stakeholder Investment

Tim Coleman is the Executive Director of the Kettle Range Conservation Group [KRCG}, a Republic, Washington organization that devotes its time and energies to protecting wildlife and sensitive species habitats in the Kettle Range in Northeast Washington. Although forest collaboration is not specifically part of KRCG's mission, the organization is a member of the collaborative Northeast Washington Forest Coalition. Mr. Coleman is an Iowa native, but he has lived in the West for some 44 years.

In this interview, he discusses his views on conservation, forest restoration, wilderness and the declining health of national forests east of the Cascades in Washington State.

Evergreen: Mr. Coleman, we've not met before, though others give you high marks for your conservation work. Tell us about yourself.

Coleman: I grew up in rural Iowa and graduated from Dowling High School, a Catholic college prep school in Des Moines in 1972. Then I headed west.

My brother was a state trooper in Oregon, and I had visited him while on Navy leave. I fell in love with the Pacific Northwest, then I fell in love with a girl from Eugene. The rest is pretty much history.

Evergreen: During your Lane Community College years, were you active in the conservation community?

Coleman: I was – various local bike path projects, wilderness advocacy, land uses planning, national forest planning, Earth First events and protests against clearcutting in the North Santiam watershed and the Bull Run Watershed.

Evergreen: Those were heady and hectic days for all of us who were trying to influence the outcome of the federal forest planning process in western Oregon. We've advocated for active, science-based forest management for 30 years, but I don't think we made much progress until the forest collaboratives began to gain some traction in the political arena.

Coleman: Knowing that you've interviewed Mike Petersen [Lands Council Executive Director] a couple of times, you know that none of us feels like we've made as much progress as we had hoped to make.

Evergreen: How do you measure progress within the Kettle Range Conservation Group?

Coleman: Species habitat conservation and more designated Wilderness acres are the two big goals.

Evergreen: How has the meaning of the word "conservation" changed in the years since you were at Lane Community College?

Coleman: We've transitioned from the conservation of single resources or species – like the northern spotted owl – to the conservation of ecosystems.

Evergreen: So transitioning from trying to protect spotted owls and their habitat to the more broad-based conservation of old growth ecosystems by placing them in reserves where no management activity is permitted?

Coleman: That's correct, though our group's focus is more specific and more project oriented. Protecting wolves and their habitat is a major effort with us, as is more designated Wilderness in the Kettle Range here in Northeast Washington.

Evergreen: How does a young man from rural Iowa find his way to Republic, Washington?

Coleman: I drove through Republic on my way back to Portland after a mountain climbing journey in the Canadian Rockies. I liked the feel of Republic, and its close proximity to woods and solitude.

Evergreen: Did you start the Kettle Range Conservation Group?

Coleman: No, the group was formed in 1976 to advocate for Wilderness status for the Kettle River Range Mountains. I didn't join until 1982. I became President in 1989, and then Executive Director in 1993, the year before we opened our office in Republic. Until '94, we were an all-volunteer group.

Evergreen: So your group has been advocating for Wilderness status for the Kettle River Range Mountains for 40 years. That's some determination.

Coleman: It is. Wilderness designation is still very controversial, but we have pretty much convinced the Forest Service not to construct roads into these unroaded and undevel

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RON GRAY: A Deep Sense of Obligation

Ron Gray is vice president of the Northeast Washington Forest Coalition, a forest collaborative group based in Kettle Falls, Washington. Mr. Gray is also fuels manager for Avista Utilities 50 megawatt, all biomass power plant at Kettle Falls. The facility is located at Kettle Falls, 80 miles north of Spokane, Avista's corporate headquarters.

Evergreen: Ron, if memory serves me correctly, we first met when you were working for International Paper at Gardiner, Oregon. We were putting the pieces of Evergreen Magazine together in Medford, and you arranged a nice paper donation from IP. Isn't that right?

Gray: I had forgotten about that, but you are correct. IP did donate quite a bit of magazine paper to your early Evergreen efforts. It was a different time and a different world.

Evergreen: It certainly was. Who would have thought that IP would ever leave Oregon?

Gray: The liquidation of the company's Oregon assets shocked a lot of people. The Gardiner mill had been built in 1964 and, at one time, employed 300 people.

Evergreen: We recently drove through Gardiner. There is nothing left that even hits of what a bustling community it was for decades.

Gray: When a community loses its largest employer, things change pretty quickly.

Evergreen: So how did you get from Gardiner to Kettle Falls?

Gray: I was very fortunate. When the mill shut down a friend suggested that I apply for the Kettle Falls fuel manager's job. I did and was hired. The good news is that I was only out of a job for two weeks. The bad news was that my wife had to stay with her teaching job in Reedsport for two years. But it beat accepting an IP transfer to the Southeast. We both wanted to stay in the Pacific Northwest.

Evergreen: I presume your job as fuel manager is about the same as that of a chip buyer for a paper mill.

Gray: It is, though when you are purchasing biomass, you don't have to be as discriminating as you do when you are buying chips for paper. Quality is less important here than it was in Gardiner.

Evergreen: The Kettle Falls plant is a 50 megawatt facility. That's not small.

Gray: No, it isn't. When the facility was completed, it was the largest stand-alone biomass plant in the United States owned by a utility.

Evergreen: How many tons of biomass does the Kettle Falls facility burn annually?

Gray: About 240,000 bone dry tons, or about 15,000 truckloads. Supplying the facility is challenging. At times, we reach out more than 200 miles to find sufficient hog fuel. That takes us into northern Idaho, western Montana, southern British Columbia and central Washington.

Evergreen: So that readers will understand, biomass is essentially wood waste.

Gray: That's correct. Sawmill residues that can't be manufactured into a higher value product or wood waste collected from logging operations. There is also tremendous potential in very small diameter trees that are removed from forest restoration projects. They're too small for lumber but work well for us.

Evergreen: The electric forests.

Gray: In a manner of speaking, yes. As you well know, we have hundreds of thousands of acres of very small trees that need to be removed from forests that simply hold too many trees to sustain themselves.

Evergreen: Which brings us to your participation in the Northeast Washington Forest Coalition.

Gray: I joined the coalition at the request of Duane Vaagen, who was instrumental in its founding. But please understand that I didn't join because Avista saw an opportunity to increase its biomass supply. I joined because forest collaboration is the first hopeful sign I've seen in 30 years for peacefully resolving the long standing dispute between our wood products industry and the conservation community.

Evergreen: We certainly agree, but we're curious about what you see that has you believing that collaboration is the solution to the decades if disputes between conservationists and

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DYLAN KRUSE: A Cohesive Vision

Dylan Kruse is Policy Director for Sustainable Northwest, a Portland-based conservation group specializing in organizing and managing grass roots collaboratives that work programmatically in forest, water, rangeland and energy conservation and development. Founded in 1994, the non-profit Strives to identify common ground among rural and urban stakeholders. It currently assists 33 collaborative forest restoration projects in Oregon and Washington.

Mr. Kruse is a Lewis and Clark College graduate, and holds a degree in International Affairs. In this interview, he answers questions concerning Sustainable Northwest's forestry programs.

Evergreen: Mr. Kruse, judging from your job description, you are a very busy young man.

Kruse: I am, indeed, but it's a very exciting time to be in the collaboration and restoration business.

Evergreen: How so?

Kruse: Many reasons, but none more important than the fact that the cultural lines that for years distanced rural communities from our urban centers are being erased, which is to say that people living in places like Portland and Seattle have become more productively engaged in helping revitalize rural communities than perhaps they've ever been.

Evergreen: To what do you attribute this sea change – and after 30 years in the forest education business, we think we know a sea change when we see one.

Kruse: It is a sea change for sure. I attribute it to the hard work of forest, rangeland, water and energy collaborative groups that represent the varied interests or rural and urban stakeholders in search of common ground, common understanding and a common path forward.

Evergreen: Developing lines of communication that help mute conflicting ideologies.

Kruse: Exactly. Most Americans now live two, three or four generations removed from their rural heritage. They don't have the hands on experience with nature that people living in rural areas continue to pass from one generation to the next. The collaboratives are helping to restore those lost connections by giving people in urban areas the opportunity to sit at the same discussion tables with their rural neighbors. As I said a moment ago, it's an exciting time for us.

Evergreen: Your literature – which is both impressive and informative – suggests that Sustainable Northwest works at the convergence of the economic and environmental policy making. Are we correct?

Kruse: You are correct. In fact, we don't engage in projects or programs that don't have economic and environmental components.

Evergreen: So, in a matter of speaking, you search for market solutions to environmental problems.

Kruse: That's true, though I would add that our role is to help diverse groups of local stakeholders identify market solutions to environmental problems.

Evergreen: Over the last 18 months, we've done somewhere between 20 and 30 interviews with members of various collaborative groups in Idaho, Montana and northeast Washington. Again and again, we heard how important it is to build mutual trust and respect, and how long it takes for common misconceptions to be replaced by more accurate perceptions of one another's values.

Kruse: There is no short-cutting the time it takes to build trust and respect among stakeholders that for years were at odds – often publicly - with one another. It took real courage for Mike Petersen, who runs the Lands Council in Spokane, and Duane Vaagen, who owns Vaagen Brothers Lumber Company, at Colville, to actually start a conversation with one another. That's example-setting leadership.

Evergreen: We've interviewed both Mike and Duane, and think they've both done a marvelous job with the Northeast Washington Forest Coalition. We once asked Mike why the Lands Council ditched its litigation strategy in favor of collaboration and he said simply, "We weren't getting our needs met."

Kruse: We think the litigators are slowly marginalizing themselves. Their voices are being replaced by more realistic and reasonable voices that are coming together around some common themes that the public

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SUSAN JONES: The Evolution of CLT

Susan Jones is a Seattle architect with deep and remarkably instructive roots In Pacific Northwest forests.

In this interview, she discusses her commitment to CLT's environmental advantages – among them the fact that it can be manufactured from small diameter trees of the kind that scientists say must be removed from overcrowded, diseased and dying central and eastern Washington forests in order to slow the advance of catastrophic wildfires that are quite literally consuming Washington's way of life.

Evergreen: Ms. Jones, you have the distinction of having built the first house in Seattle constructed entirely from cross-laminated timbers. What inspired your initial interest in CLT?

Jones: Probably its carbon sequestration powers. Mitigating climate change is a matter of increasing concern in the architectural world, as we architects are the ones specifying materials for our buildings. Carbon emissions from buildings constitute a huge amount of our climate change issues. And CLT holds significant potential for reducing the carbon footprint associated with buildings. And, in Canada and Europe they are building them up to 18 stories tall.

Evergreen: Many architects shunned wood-frame construction for years out of a fear that timber harvesting was an unsustainable activity. What was the prevailing view when you were an architecture student at Harvard?
Jones: The very first project I worked on was a design using wood. All the rest used concrete, masonry or steel structure.

Evergreen: And yet we know that wood is the only renewable structural building material on earth, and that wood products consume far less energy in their manufacture and use than do products made from steel or concrete.

Jones: All true, but it has taken some time to break through all of the misinformation and disinformation surrounding forest practices and timber harvesting. CLT only first came on the market in Austria, Germany and Switzerland in the late 1990s.

Evergreen: Where did you first see cross-laminated timbers in use?

Jones: I worked in Vienna, Austria as a young architect. The Austrians are leading the way in CLT manufacturing, design and use. I was especially impressed by their ability to manufacture high quality CLT components from small diameter trees that are carefully thinned from forests in Austria. The Austrians are very good foresters. Their forests are very impressive.

Evergreen: They are indeed. You tell the story of your family's introduction to forestry in a beautiful little book you recently wrote titled CLT Investiy-ou recently wrote titled CLT Investigations. Would it be fair to say that the failure of your grandfather's small forest on Orcas Island contributed in some small way to your interest in CLT?

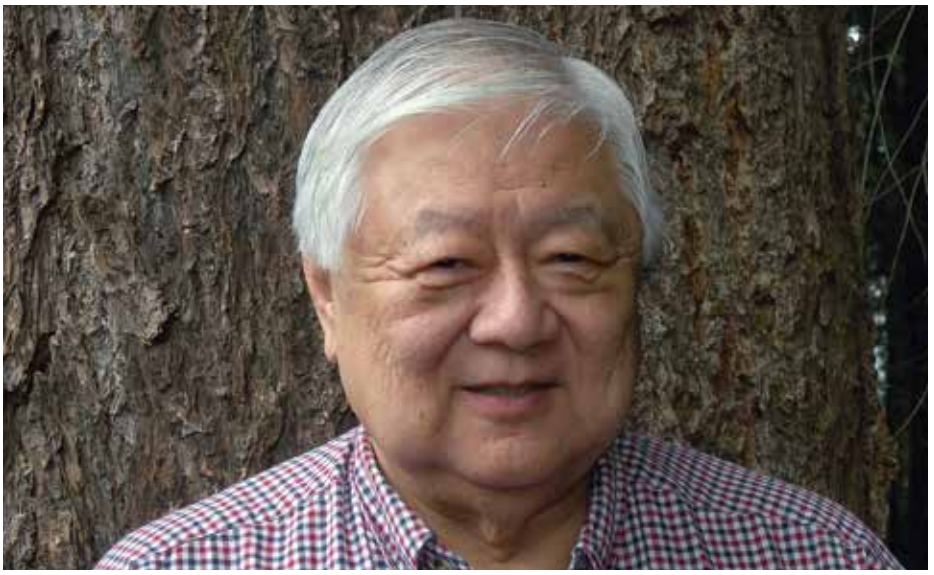
Jones: I suppose so, though I was very young when my grandfather purchased his tract. What had more influence on me was what I learned in the course of our family's commitment to pick up where he left off. As you suggest, his initial planting failed for lack of hands-on management. As a family, we decided to replant the tract. We hired Rain Shadow Consultants. It was that experience that really opened my eyes to forestry's great possibilities.

Evergreen: You do a very nice job of weaving your family's forestry experience into your CLT odyssey. First, there are your childhood memories of what you saw on Orcas Island, which take on new life when you revisit the island decades later; you grow up near Bellingham, north of Seattle, walk through woods to school every day, go off to architecture school at Harvard, come home and start your own firm; then you are introduced to CLT in Vienna, and the product so excites you that you launch your own independent investigation of its possibilities, and your investigation grows to include graduate architectural students at the University of Washington; and then, to test the results of your ongoing investigation, you build your own home using cross-laminated timbers, and it is the first CLT-permitted house in Seattle. Do we have your story about right?

Jones: That's a pretty good chronological summation - thank you! - and as you say, our investigation continues, and no doubt will for years to come.

To read the complete interview with Susan Jones, go to our website: www.evergreenmagaxzine.com, click on "State of Our Forests" on the toolbar, then click on "Washington."

GARY MORISHIMA: The Hope of Collaboration



Gary Morishima, PhD mathematician and co-founder, Intertribal Timber Council, Portland, Oregon and Technical Advisor for Natural Resources to the President of the Quinault Indian Nation, Seattle, Washington

In this wide-ranging interview, Dr. Morishima discusses forest collaboration and his hopes for "Anchor Forestry," a management concept of his design that will allow forest landowners to work together on projects that connect tribal landownerships with neighboring lands owned and managed by federal and state governments, Real Estate Investment Trusts [REITS], Timber Investment Management Organizations {TIMOS] and individuals.

Evergreen: Dr. Morishima, we have known you through our work with the Intertribal Timber Council for nearly 20 years. We know you played a key role in ITC's 1976 founding, but I don't believe we've ever asked you what was going on the 1970s that had you believing such an organization was needed.

Morishima: Until the mid-1970's, the Bureau of Indian Affairs (BIA) had pursued what it perceived as its fiduciary duty to generate income by selling timber from the lands that the United States held in trust for the benefit of Indians. There were growing problems in the BIA's single-minded approach to management. Annual allowable cuts were not being realized, stumpage was being sold at below market values, some stands were overstocked and reforest- ation efforts on cut over lands were dismal. Most importantly, Tribal objectives and priorities for long-term stewardship of non-timber resources, like water, fish, wildlife, foods, medicines, and environmental, and cultural resources were being largely ignored. Individually, Tribes were becoming increasingly concerned and frustrated.

Evergreen: Understandably so, but what brought the issue to a head?

Morishima: The spark that led to the establishment of the ITC came in the mid 1970's when the BIA refused to allow tribal leaders to substantively participate in the development of programs to utilize a special $10 million Congressional appropriation for Indian forest development which the Tribes had worked hard to secure. This happened shortly after passage of the Indian Self Determination and Education Assistance Act in 1975, so the time was right for Tribes to assert greater influence over the management of their own assets. Disturbed and frustrated, a few Tribal leaders decided to convene a symposium titled "Making Dollars and Sense Out of Forestry" to share perspectives and learn how the BIA's approach to forest management compared with that being practiced by federal and state agencies and private industry. At the end of that symposium, a small group of Tribal leaders and advisors assessed the situation.

Evergreen: Were they able to translate tribal frustration into some sort of action plan?

Morishima: Yes, in due course. It was clear that many Tribes shared common concerns and that the problems that had to be addressed were systemic in nature. It was also clear that individual Tribes would not be able to bring about the changes that were needed. At that point, there were two major paths that were considered. The first was to litigate and fight, and the second was to try to work together with the BIA and others to forge a new future. The first path would be costly, take many years, and likely to be met with divisiveness and intransigence by the Administration. And even if litigation were to be successful, the problems facing tribal forests would still need to be fixed.

Evergreen: Two very different and difficult choices. What to do when faced with so many unknowns?

Morishima: Ultimately, Tribal leaders chose the second path, convinced that the best chance to make lasting improvements would be to work together in common purpose and to forge partnerships with the BIA, industry, and academia. The Intertribal Timber Council was formed within a matter of a few weeks.

Evergreen: In hindsight, was working for change, and not litigating, the right choice?

Morishima: Our experience over the last 40 years prove that tribal leadership made the right choice.

Evergreen: Over the years that we've been reporting from Indian Country, we've seen tribal forestry assume its' more rightful place on the nation's

To read the complete interview with Gary Morishima, go to our website: www.evergreenmagaxzine.com, click on "State of Our Forests" on the toolbar, then click on "Washington."

MITCH FRIEDMAN: Restoring Resiliency

Mitch Friedman is the Founder and Executive Director of Conservation Northwest, a Seattle-based conservation group that grew out of a 1988 monograph he co-authored and edited near the end of his rabble-rousing Earth First era.
attention."

In this interview, Friedman discusses Conservation Northwest's collaborative successes, still bothersome regrets from his Earth First years and his belief that collaboration offers the best hope for resolving still contentious issues concerning the management of the West's National Forests.

Evergreen: Mr. Friedman, it is my recollection that you and I first met at some sort of spotted owl meeting in Portland in the late 1980s. Do you recall the meeting?

Friedman: Not specifically, but I do remember meeting you somewhere in time. Those were tense times for all of us. So much at stake and seemingly no way to agree on anything about owls or old growth.

Evergreen: And things got much worse before they got better. The Evergreen Foundation was only four years old when the northern spotted owl was listed in June of 1990. Over the ensuing five years we lost all but two of our founding sponsors – all of them smaller, family-owned lumber manufacturers in southern Oregon.

Friedman: I've spent years regretting the loss of all those family-owned sawmills. It was never our intent. All we did was enable the survivors to grow larger. I am sorry for the hurt we caused in those little companies and their communities. Now we need those small innovative mills in a way we've never needed them before.

Evergreen: We'll come back to that in a moment, but first I want to ask you about your 2012 interview with Seattle Times columnist, Ron Judd. It is brutally candid on your part, especially your admission that you are an atheist. That's tough stuff.

Friedman: It is for many, and I even went to Hebrew school, but the whole idea of God never made sense to me. That doesn't mean that I view people as alone or as a pinnacle; man fits into a larger scheme. Nature is that scheme. But it would be a mistake to see that as a conflation of nature and God.

Evergreen: Were you a teenage hell-raiser?

Friedman: I was defiant, independent as hell, I guess you'd say, I rejected most conventional wisdom, then filled in the blanks for myself. Animals were very important to me, and they still are.

Evergreen: But your persona doesn't suggest a guy who ever chose animals over people, which is something you implied at in your Seattle Times interview.

Friedman: People have been good to me in my personal and professional life.

Evergreen: Given your tree-sitting days, how is it that you became one of the early and quiet leaders in the forest collaboration movement we see today? That's a remarkable transformation, to say the least.

Friedman: It took a long time for me to get there in my head. In my wild Earth First days, I was arrested a dozen times, protesting from Yellowstone to Idaho to the Upper Skagit, everything from old growth to owls and grizzly bears. I was in a leadership role because there a leadership vacuum and I filled it. I had some skills for that from being a good athlete. But learning strategy, and developing the wherewithal to see my strategic options, that took time.

Evergreen: You were one of the earliest tree sitters, weren't you?

Friedman: I was.

Evergreen: We can guess why you did it, but tell us in your own words.

Friedman: Well, apart from my defiant streak, I did it to call public attention to all those beautiful and very old trees we were trying to save from chainsaws.

Evergreen: And it worked.

Friedman: We were far more successful than any of us thought we'd ever be. The Northwest Forest Plan pretty much shut down the logging industry in the National Forests in northwest Washington.

Evergreen: So why didn't you pack up and go home like Patrick Moore did after he decided Greenpeace had met its goals?

To read the complete interview with Mitch Friedman, go to our website: www.evergreenmagaxzine.com, click on "State of Our Forests" on the toolbar, then click on "Washington."

RODNEY SMOLDON: Wildfire's Challenge

Rodney Smoldon is the Forest Supervisor on the 1.1 million acre Colville National Forest in Northeast Washington. From his office in Colville, he commands a staff of approximately 135 permanent employees and an additional 100 summer employees.

In this interview, Mr. Smoldon discusses the challenges he faces as Forest Supervisor on the Colville, a much watched national forest that appears to be breaking new ground, not just in forest collaboration but also in the use of innovative management tools Congress in providing in hopes of expanding forest restoration work necessary to reduce the risk wildfire in Northeast Washington.

Evergreen: Mr. Smoldon, 2015 was the worst wildfire year in Washington State history. More than one million acres – nearly 12,600 square miles of forest and rangeland - were lost, most of it west of you, but still too close for comfort. You face an enormous challenge, especially with so much forestland so close to Colville and Kettle Falls.

Smoldon: Challenging for sure. Our wildfires are growing in size, frequency and intensity. You need look no further than the well managed forests owned by the Colville tribe to get a glimpse of what might have happened here. We were lucky this time.

Evergreen: Our Colville tribal friends tell us they faced the proverbial perfect storm: drought, heat, high winds and a lack of sufficient firefighting capacity.

Smoldon: When you have 80 to 100 mile an hour winds, it does not matter how well your forest is managed. Burning debris will reach into trees well ahead of the actual fire. Again, we were very lucky on this forest to only have had about 100,000 acres burned, most of it moderate to low severity.

Evergreen: The underlying problem on the Colville National Forest being the same one other western national forests are facing: insect and disease infestations in overstocked and drought stressed forests, triggering significant tree mortality, exacerbated by a warming climate cycle, leading to inevitable stand replacing wildfires.

Smoldon: You got it.

Evergreen: How bad is it on the Colville?

Smoldon. Mortality exceeds annual growth in some areas on the Colville. But not everywhere. I tell people who ask that there are social, biological, cultural and educational benefits to be observed in untreated or unmanaged forests, but we're way over on the wild side on the Colville.

Evergreen: What do you mean when you say 'way over on the wild side.' Smoldon: I mean we have too many untreated areas that fit your description: overstocked, drought stressed havens for insect and diseases infestations, and thus a high risk for wildfire. What isn't well understood is that these fires are so destructive that they make natural recovery extremely difficult.

Evergreen: In our many conversations with collaborative groups, we are hearing a lot of concern for the damage these big wildfires are doing. With their concern comes a parallel hope that more acres can be treated before they burn.

Smoldon: For the Forest Service, it is a function of staffing and money, but yes, we certainly share their concern, which is why we are such enthusiastic supporters of the Northeast Washington Forestry Coalition.

Evergreen: How would you rate their work?

Smoldon: So far, so good. It's an excellent group. I enjoy our relationship with them, and I think my staff does too.

Evergreen: How would you describe your relationship with them?

Smoldon: The Forest Service is a public agency and we who work for it are public servants, so everything about our relationship with NEWFC is formal, completely above board and out in the open. Sadly, the rumor mill has us making side deals with the collaborative. Hasn't happened, and won't.

Evergreen: It must be difficult at times, given the fact that you are a home town boy.

Smolden: I have friends – mostly old high school classmates – on both sides of the issue.

Evergreen: 'Both sides' being the debate over whether publicly owned

To read the complete interview with Rodney Smoldon, go to our website: www.evergreenmagaxzine.com, click on "State of Our Forests" on the toolbar, then click on "Washington."

KURTIS VAAGEN: Replacing Litigation

Kurtis Vaagen is a third generation Washington lumberman, and the younger of Duane Vaagen's two sons. Vaagen Brothers Lumber Company was established near Colville by the elder Mr. Vaagen's father in 1952. His grandson, Kurtis, 31, handles special projects for the company, devoting a good deal of his time to the company's relationship with the Confederated Tribes of the Colville Nation. The tribe owns about 1.4 million acres of which 660,000 acres are prime timberland in Northeast Washington and sells timber to Vaagen Brothers.

Evergreen: Tell us a bit about your growing up years and your education.

Vaagen: I was born and raised here in Colville, and spent just about every opportunity I could find in the woods. After graduating Colville High School in 2003 I moved to Spokane and enrolled in Spokane Community College. I earned my AAS Degree from SCC in Environmental Sciences and Forestry.

Evergreen: Did you always believe you'd come to work here?

Vaagen: I always knew I wanted to live in this area, given my desire to work close to the forest. And, at some level, I knew my Dad would provide the opportunity for me to engage in the forest health debate underway here in Northeast Washington and around the country. But my dad never said, 'You have to come to work for our family's company. That was my choice, and I'm glad I made it.

Evergreen: What's the lure?

Vaagen: I have the opportunity to work with some of the best minds in our industry. I also get to contribute to the community I have been a part of my entire life. Couple these two things with our geographic location and I wouldn't trade it for the world. I have done a fair amount of traveling for someone my age. And I've seen some beautiful country, but there is no place quite like our corner of the world. We're all very lucky to live here.

Evergreen: What's your job here at Vaagen Brothers?

Vaagen: I have a number of Jobs, but up to this point I have been bouncing around filling in for other members of the team when we get too busy. Working with the Colville Tribe is one of my main goals and interests. Every day is its own learning experience.

Evergreen: We had heard that you work closely with the Colville tribal forestry department, and we presume your relationship is as a buyer of their timber. Correct?

Vaagen: We do buy logs from the Colville Indian Reservation. Given our proximity to reservation timberland, there is mutual benefit in our ability to provide them with a market for logs that in other areas are not utilized simply because there are no mills within economical hauling distance. We work closely with their forestry crew to insure that our relationship continues to grow in a positive manner.

Evergreen: Have you had the opportunity to tour the tribe's forests and get to know a little about their brand of forestry?

Vaagen: I have been on a number of tours on their tribal lands. They have been modifying their forest practices at a pace much faster than I have seen anywhere else. The Tribe knows what a healthy forest should look like, and they do what it takes to make their reservation look and produce in a manner consistent with their long term vision. It's my understanding that tribes that manage their own timberlands try to look seven generations into the future. That's very impressive.

Evergreen: It certainly is. How would you compare what the tribe is doing on their timberlands with what the Forest Service does on the Colville National Forest?

Vaagen: The biggest difference I see between the two ownerships is that the Tribe knows how to make a profit while doing right by the land. The Tribe's forestry staff goes through NEPA planning process much like the Forest Service, but it proceeds knowing that the forest treatments it designs – mainly mechanical thinnings and the application of prescribed fire – need to generate sufficient revenue to pay for the work. The Forest Service has no such mandate. Some of its projects make a little money, others are revenue neutral and some are money losers. In the latter case, taxpayers foot the bill.

To read the complete interview with Kurtis Vaagen, go to our website: www.evergreenmagaxzine.com, click on "State of Our Forests" on the toolbar, then click on "Washington."

MARK TEPLY: From A to Z

Mark Teply is a senior scientist with Cramer Fish Sciences, a Gresham, Oregon consulting firm that works for federal, state and private clients in Idaho, Oregon, Washington, Montana, California and Alaska.

In this interview, Mr. Teply discusses his work as Project Manager for the Mill Creek A to Z Project, a Forest Service stewardship contract on the Colville National Forest.

Evergreen: Mr. Teply, we've never met before, but you've been in the resource management game for a long time and you bring a very impressive resume to your work.

Teply: Thanks for saying that. As you know from your forestry education outreach, the work never ends, Evergreen: It certainly doesn't. Your resume tells us that you received your master's degree in forestry from Cal Berkley in 1986, the year we published our first edition of Evergreen Magazine. A lot of water under the bridge. Teply: That's for sure.

Evergreen: Tell us a bit about the A to Z Project. Are we correct in assuming that this is the first project of its kind in your 30-year work history?

Teply: I've worked on several large forest planning projects, including the Santa Fe Pacific Timber Company, the Idaho Department of Lands and the Washington Department of Natural Resources, but this is the first Forest Service stewardship project wherein the contractor – in this case Vaagen Brothers Lumber Company – has been allowed to pay for the planning work, which we at Cramer Fish Sciences are doing.

Evergreen: Does Vaagen Brothers have any say in the project's design or approval?

Teply: No, they just get to pay the bill. Final authority, of course, still rests with the Forest Service.

Evergreen: Seems like a pretty gutsy move on Vaagen's part.

Teply: It is to the extent that they no control over the outcome – the return on investment, so to speak. But there is a demonstrable need for the project.

Evergreen: Tell us about the project site.

Teply: The A to Z Project spans 50,000 acres about 10 miles northwest of Colville, Washington. There are several key stakeholders who bring quite divergent values and opinions to the table, and we sought to solicit citizen input well beyond the membership of the Northeast Washington Forest Coalition.

Evergreen: Shuttle diplomacy?

Teply: Yes, in a manner of speaking. Our goal was to gather as much input as we possibly could. People who think that a project is way too big and others who think it is way too small, plus those who suspect there must be something wrong if Vaagen Brothers is involved and others who suspect that something is wrong if conservationists are involved.

Evergreen: How do you deal with those who swing from opposing poles?

Teply: Often in one-on-one meetings.

Evergreen: What do you tell them?

Teply: We remind them at our role at Cramer Fisheries is strictly operational. That we work at the direction of the Forest Service. Our guiding document is the Colville National Forest Plan. We don't deviate from it, which means all of the hard decisions about treat and no-treat areas were already made by the Forest Service. We are simply following the standards and guidelines approved in the Forest Plan in the A to Z project.

Evergreen: Tell us about the project area.

Teply: The Mill Creek drainage is remarkably diverse for being such a small area. All three forks, North, Middle and South, drain into the Colville River, which runs into the Columbia River. The three forks are fish-bearing streams but not very productive. Summer stream flows are the limiting factor.

Evergreen: What makes the area so diverse?

Teply: Wet to dry site forest characteristics with dramatic changes in elevation, slope and aspect that influence tree species composition.

Evergreen: We will hazard a guess that there are far too many trees present than the site can support.

Teply: Most of the project area is overstocked with a buildup of ladder fuels in the understory.

Evergreen: So heavy ground fuels?

Teply: There can be a tremendous amount of biomass on the ground.. Lots of competition-based mortality in standing trees, lots of mountain pine beetles and root rot. The entire area is set up for catastrophic fire.

Evergreen: How on earth do you even

To read the complete interview with Mark Teply, go to our website: www.evergreenmagaxzine.com, click on "State of Our Forests" on the toolbar, then click on "Washington."

Lloyd McGee: A Pathway Forward

Lloyd McGee is Washington Forest Programs Manager for The Nature Conservancy. He lives in Wenatchee, and is currently deeply involved in a search for someone with whom the Conservancy can partner in the construction and operation of a sawmill he hopes to site at a yet unknown location in central Washington. He first revealed his search to us when we interviewed him in March of 2015.

In our 2015 interview with McGee, he told us he applied for the program manager's job with the Conservancy because he wanted to round out his career by "looking through a different prism." Apart from searching for sawmill investors, he works with and chairs collaborative groups that have several forest restoration projects underway in central and eastern Washington.

McGee is a 1983 graduate of the University of Idaho, College of Forestry, where he earned degrees in Forest Resource Management and Forest Products Business Management.

Evergreen: Mr. McGee, you may have the most unusual job in the conservation world. Outside of the Nature Conservancy, we can't name a single conservation group in the United States that employs someone whose job it is to hunt for investors to partner in a saw-milling venture.

McGee: I can't either, but that isn't all I do, though it is a big part of everything I do.

Evergreen: How so?

McGee: The Conservancy's mission is to conserve the lands and water on which all life depends. In our part of the world – central and eastern Washington – our lands and our watersheds are in grave danger due to the rapid spread of insects and diseases that are fueling wildfires larger, more destructive and more frequent than at any time in recorded history. Working with our collaborative partners, we are striving to significantly increase the acres of forest restoration treated, but budgets are limited. We need to utilize revenues from the sale to sawmills of the biproduct logs and biomass that are removed from the treatments and reinvest those revenues into more acres restored. However, without local sawmills, the potential revenues are being spent on long distance hauling of these logs to distant mills.

Evergreen: We know the forest health/wildfire story pretty well, but we frankly never expected a conservation group would step into the political limelight that shines on our region's forest health crisis. As you know, there has been great controversy about what – if anything – should be done to reduce the wildfire risk, though the stakeholder collaborative groups working in Washington appear to have quieted criticism from most of the "do nothing" activists.

McGee: We've come a long way in terms of our understanding of the underlying causes of our big wildfires, and you are quite right; the collaboratives have done a lot to increase public understanding and trust. Doing nothing has never been a viable option, but figuring out what to do and how to do it has taken quite a lot of time.

Evergreen: So how is your search for investors progressing?

McGee: About as well as can be expected. We knew going in that finding investors willing to deploy as much as $50 million of their own money wasn't going to be a walk in the park. We are looking at ways to share in the investment risk or ways to spread the risk. I answer lots of questions from potential investors, often from well qualified people who have experience in processing biomass and bio-fuels and a range of innovative products manufactured from small diameter trees.

Evergreen: What sorts of questions do they ask?

McGee: The big questions, which we aren't yet able to answer, all concern the predictability and sustainability of the fiber supply that is available within an efficient haul distance in Central Washington. . We're working on a log supply study that answers the most pressing questions about available supply and expect to have these answers by November, 2016.

Evergreen: When you say "we," we presume you mean the Conservancy.

McGee: That's correct.

Evergreen: Do you have any back-of-the-envelope estimates you can share?

To read the complete interview with Lloyd McGee, go to our website: www.evergreenmagaxzine.com, click on "State of Our Forests" on the toolbar, then click on "Washington."

The Evergreen Foundation

The Evergreen Foundation is a non-profit, 501(c) organization. We were incorporated in Oregon in 1989, two years after our founding. Our various activities are governed by a seven-member board of directors. We meet annually to discuss our long-term progress

Our mission has remained unchanged for 32 years: we exist to help advance public understanding and support for science-based forestry and forest policy. To this end, we publish Evergreen, a periodic journal that reaches a diverse audience composed of forest stakeholders, elected officials and he news media. We also maintain one of the most visited, content-rich forestry websites in the world. Find us at www.evergreenmagazine.com

In our research, writing and publishing activities, we work closely with scientists, conservationists, foresters, lumbermen and stakeholders who help us maintain our unblemished record for accuracy and integrity.

We believe the health, productivity and resilience of forests can only be insured through the application of science-based principles and local knowledge offered by those who have lived with the land and their mistakes long enough to have developed a wisdom and capacity for judgement.

Disruptive forest policies and practices– including serial litigation – must be addressed in ways that encourage and expand collaborative decision making by forest stakeholders whose environmental, economic, social and historic interests and activities are paramount to the future our nation's forests.

No matter where we live in America, we are all consumers of the economic and environmental benefits forests provide: food, clothing, shelter, medicines, jobs, a long list of everyday products and an even longer list of aesthetic benefits that are the sum and substance of an outdoor recreation abundance that is available to all of us at little or no cost.

Because we are a 501(c)3 organization, we do not lobby or litigate. Education is our only goal. Funding for our work comes from Foundation members and other public and private-sector organizations that share our commitments to education and science-based forestry. Contributions are tax-deducible to the full extent that federal law allows.

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